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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/608,621	06/27/2003	Bradley C. Kuszmaul	7830-007-999	9865

7590 09/07/2004

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EXAMINER

PAN, DANIEL H

ART UNIT	PAPER NUMBER
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2183

DATE MAILED: 09/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/608,621

Applicant(s)

KUSZMAUL ET AL.

Examiner

Daniel Pan

Art Unit

2183

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

1. Claims 1,2 are presented for examination.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1,2 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that it fails to point out what is included or excluded by the claim language. This claim is an omnibus type claim. See Ex parte Fressola, 27 USPQ2d 1608 (Bd. Pat. App. & Inter. 1993). See also MPEP 2173.05 (r).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1,2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Manohar et al. (5,999,961) in view of Neumann (3,716,851) .
4. As to claims 1,2, applicant claimed only cyclic, segmented prefix circuit (claim 1), and cyclic, segmented parallel prefix circuit (claim 2). No functional part of these two circuits has been recited. The prefix circuit and the segmented parallel prefix circuit (see claims 1,2) were already known in the past in the art as admitted by applicant's own disclosure (see page 1, lines 11-16, page 3 , lines 11-18, page 4, lines 35-36).

5. Manohar disclosed a system including at least ;

a) prefix circuit (see figs.1,b,4a,b, col.2, lines 3-54, see also fig.3);

b) parallel prefix circuit (see figs.1,b,4a,b, col.2, lines 3-54, col.2, lines 3-56,col.5, lines 36-42, col.6, lines 39-46, col.10, lines 23-67, col.11, lines 1-17).

6. Manohar did not specifically show the word "segmented" in the circuit. However, based on applicant's specification, the segmented prefix circuit was known in the art (see page 4, lines 35-36 under the Background of Invention section). It would have been obvious to one of ordinary skill in the art to use segmented prefix circuit as claimed because it could provide a collection of prefix operations over adjacent segments. Furthermore, in view of the specification, the segmented prefix circuit is that : "in addition to provide index inputs ... to the circuit we provide additional 1-bit inputs called segment bits. indicate where a new segment is " (See page 5 , lines 1-5). However, this feature is not reflected in the claim. Therefore, based on the broadest interpretation, the word "segmented" is being interpreted to be any segment of the bit information input to the circuit in addition to the original index inputs. From the above reasoning, Manohar did disclose a segment of bit information [V] inputted to the prefix circuit in addition to the index input [X₀] (see fig.1b). Applicant is welcome to provide feedback in the next response.

7. Manohar did not specifically show the "cyclic" feature of the prefix circuit as claimed. However, the cyclic feature is taught in applicant's own disclosure (see fig.12) as a wrap around from the end to the beginning to the circuit (see page 11, lines 31-34,

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page 15, lines 8-36, see also fig.12). Therefore, based on the specification, the word "cyclic" is a feedback path to the circuit. Manohar did not specifically show the cyclic, and/or feedback path to his prefix circuit as claimed. However, Neumann disclosed a prefix circuit [prefix decoder circuit 15'] having cyclic (feedback) connection (see fig.4, see also also a prefix circuit [prefix encoder/decoder] to compute the input values of the differential circuit in col.7, lines 4-31, col.8, lines 51-68, col.9, lines 1-55, see also table 4). It would have been obvious to one of ordinary skill in the art to use Neumann for including the cyclic connection to the prefix circuit in Manohar as claimed because the use of Neumann could enhance the ability of the prefix computations of Manohar to accept a final output of a specific prefix circuit at a predetermined stage of the input process of a given circuit node, such as the beginning or the end nodes, thereby enhancing the processing capability of the prefix circuit of Manohar to accept a more complex computation result at a particular node, and it could be achieved by preconfiguring the feedback path of Neumann with modified read/write ports, into Manohar, such that the cyclic circuit connection of Neumann could be recognized by Manohar, and because Manohar also disclosed his V channel for feeding back data down the circuit tree (see also col.2, lines 24-5, see fig.1b [V]), which was the indication of the need for including a cyclic circuit for achieving the enhanced processing capability, and in doing so, provided a motivation.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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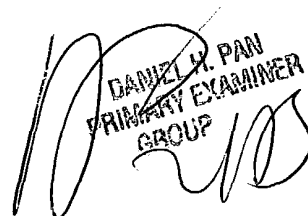
a) Ma et al. (6,151,295) is cited for the background teaching of a cyclic prefix segment (see col.7, lines 6-22).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Pan whose telephone number is 703 305 9696. The examiner can normally be reached on M-F from 8:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chan, can be reached on 703 305 9712. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

21 Century Strategic Plan


DANIEL W. PAN
PRIMARY EXAMINER
GROUP